

**Experiment Number:** 99930-96

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

**Test Compound:** Endocrine disruptor (Genistein)

**CAS Number:** 446-72-0

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:28:59

**First Dose M/F:** NA / NA

**Lab:** NCTR

**C Number:** MG96005

**Lock Date:** Not Entered.

**Cage Range:** All

**Date Range:** All

**Reasons For Removal:** All

**Removal Date Range:** All

**Treatment Groups:** All

**Study Gender:** Both

**PWG Approval Date** NONE

**Experiment Number:** 99930-96

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Type:** SPECIAL STUDY

**Route: DOSED FEED**

**Species/Strain:** Rat/CD

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:28:59

**First Dose M/F:** NA / NA

Lab: NCTR

CD Rat Male  
F3 0 PPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5
	1	1	1	0	1	1	1	0	2	2	1	1	1	0	2	2	1	1	1	1	3	1
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9
	7	7	7	7	9	9	9	3	3	3	4	4	4	4	8	8	8	8	8	9	4	4
	0	1	2	3	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

## **Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Fibrosis																						1 2.0
Hepatodiaphragmatic Nodule																						1
Inflammation, Chronic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	22	1.0
Necrosis										1	1										2	1.0
Vacuolization Cytoplasmic		1							1											1		3 1.0

## **Cardiovascular System**

NONE

## **Endocrine System**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Accessory Adrenal Cortical Nodule																X	X	X			3
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Pars Distalis, Cyst															X						1
Pars Distalis, Cyst, Multiple														X		X			X		3
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Inflammation, Chronic																	1				1 1.0

## **General Body System**

NONE

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

| ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as

1) Minimal 3) Moderate  
2) Mild 4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:00

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male F3 0 PPM	DAY ON TEST	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																				
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1																				
		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 5																				
		I I I 0 1 1 0 1 1 0 2 2 1 1 1 0 2 2 1 1 1 1 3 1 9																				
		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																				
ANIMAL ID		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																				
7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 9		7 7 7 7 7 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 9																				
7 7 7 7 7 7 9 9 9 9 9 3 3 3 3 4 4 4 4 8 8 8 8 9		0 1 2 3 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2																				
0 1 2 3 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																				
<b>*TOTALS</b>																						

**Genital System**

Coagulating Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Degeneration																					3
Hypospermia																					1 3.0
Infiltration Cellular, Lymphocyte																					1 4.0
Prostate	+	+																			3
Prostate, Dorsal Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Epithelium, Hyperplasia																					1 1.0
Inflammation, Chronic																					8 1.1
Inflammation, Suppurative																					5 1.6
Prostate, Ventral Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Inflammation, Chronic	2	2	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	1	2	2	1
Inflammation, Suppurative																					1 1
Rete Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	24
Dilatation																					1 4.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Dilatation	2	2	2																		3 2.0
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Seminif Tub, Degeneration																					2 2.5

**Hematopoietic System**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:00

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male F3 0 PPM	DAY ON TEST																					
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	
		1	1	1	0	1	1	1	0	2	2	1	1	1	0	2	2	1	1	1	9	
ANIMAL ID		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	9	
		7	7	7	7	9	9	9	9	3	3	3	4	4	4	4	8	8	8	8	4	
		0	1	2	3	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	
*TOTALS																						
Spleen		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Adventitia, Inflammation, Chronic																						1 2.0
Pigmentation																						2 1.0
Thymus		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Epithel Cell, Hyperplasia																						1 2.0
Integumentary System																						
Mammary Gland		+	+	+	+	+	+	+	I	+	+	+	+	+	+	+	+	+	+	+	24	
Alveolus, Hyperplasia									1													4 1.3
Skin		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	24	
Musculoskeletal System																						
Bone, Femur		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Nervous System																						
Respiratory System																						
Special Senses System																						
Urinary System																						
Kidney		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

**Experiment Number:** 99930-96

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Compound:** Endocrine disruptor (Genistein)

CAS Number: 446-72-0

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:29:00

**First Dose M/F:** NA / NA

Lab: NCTR

**CD Rat Male  
F3 0 PPM**

\* ..Total animals with tissue examined microscopically: Total animals with lesion and mean severity grade

± ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

| ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild      4) Marked

**Experiment Number:** 99930-96

**Test Type:** SPECIAL STUDY

**Route: DOSED FEED**

**Species/Strain:** Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Compound:** Endocrine disruptor (Genistein)

CAS Number: 446-72-0

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:29:00

**First Dose M/F:** NA / NA

Lab: NCTR

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANIMAL ID	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	1	1	1	1	1	1	2	1	2	2	2	2	1	0	1	2	1	1	0	0	4	4	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9
7	7	7	7	7	7	7	8	9	9	4	4	4	4	4	4	5	6	9	9	9	9	4	4
4	5	6	7	8	9	0	7	8	4	5	6	7	8	9	0	1	1	2	3	4	5	3	4

## **Alimentary System**

NONE

## **Cardiovascular System**

NONE

## **Endocrine System**

NONE

## **General Body System**

NONE

## **Genital System**

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

### M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

| ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:00

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F3/5PPM TO CTL**

DAY ON TEST																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	1	1	1	1	1	1	2	1	2	2	2	2	2	1	0	1	2	1	1	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9
	7	7	7	7	7	7	8	9	9	4	4	4	4	4	5	6	9	9	9	4
	4	5	6	7	8	9	0	7	8	4	5	6	7	8	9	0	1	2	3	4

**\*TOTALS**

Inflammation, Chronic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	1	1	1	19	1.2
Inflammation, Suppurative																									1	1.0
Rete Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Dilatation																									2	3.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Lymphatic, Ectasia																									1	4.0
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24	
Seminif Tub, Degeneration																									1	4.0

**Hematopoietic System**

NONE

**Integumentary System**

Mammary Gland

+

Alveolus, Hyperplasia

1 1 2 1.0

**Musculoskeletal System**

Bone, Vertebra

+

1

Malformation

X

1

**Nervous System**

NONE

**Respiratory System**

NONE

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

I ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild 4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/19/2014

Time Report Requested: 04:29:00

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F3/5PPM TO CTL**

DAY ON TEST																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	8	9	9	4	4	4	4	4	4	5	6	9	9	9
	4	5	6	7	8	9	0	7	8	4	5	6	7	8	9	0	1	1	2	3

\*TOTALS

**Special Senses System**

NONE

**Urinary System**

Kidney

+

1

Capsule, Fat, Cyst

X

1

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

I ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild 4) Marked



**Experiment Number:** 99930-96

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Type:** SPECIAL STUDY

**Route: DOSED FEED**

**Species/Strain:** Rat/CD

**Test Compound:** Endocrine disruptor (Genistein)

CAS Number: 446-72-0

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:29:01

**First Dose M/F:** NA / NA

Lab: NCTR

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

### M ..Missing tissue

1-4 „Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

| ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild      4) Marked



Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:01

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F3/500PPM TO CTL**

DAY ON TEST																					*TOTALS		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6			
	1	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	0	2	1	1			
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9			
	8	8	8	9	9	9	0	0	1	1	1	1	5	5	5	5	6	0	0	4			
	7	8	9	0	1	2	7	8	9	0	1	2	3	5	6	7	8	9	0	3			
Prostate, Dorsal Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25			
Inflammation, Chronic							1	1												1	7	1.0	
Inflammation, Suppurative																					1	2	1.0
Prostate, Ventral Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25			
Inflammation, Chronic	1	1	1	1	1	2	1	1	2	1	1	1	2	1	2	1	1	2	1	2	19	1.3	
Inflammation, Suppurative																					3	1.0	
Rete Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	24	
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Dilatation																				2	1	2.0	
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25		
Seminif Tub, Degeneration	1		1		1																3	1.0	
<b>Hematopoietic System</b>																							
Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25			
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25			
Hyperplasia, Stromal							1														2	1.0	
Pigmentation													2		1	1		1			4	1.3	
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25			
<b>Integumentary System</b>																							
Mammary Gland	+	+	I	+	+	+	+	I	+	+	+	+	+	+	+	+	+	+	+	23			
Alveolus, Hyperplasia						1							2		1		3				4	1.8	
Duct, Hyperplasia									1				1		1		2		1		4	1.3	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25			

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:01

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female F3 0 PPM	DAY ON TEST	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																																								
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1																																								
		6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 5																																								
		I I I I I 0 0 0 0 0 1 2 0 0 2 2 2 1 I I I 3 2 1 0 9																																								
		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																																								
ANIMAL ID																																										
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																																										
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																																										
7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9																																										
4 4 5 5 5 5 5 1 1 1 6 6 6 6 0 0 1 1 2 3 3 3 3 3																																										
8 9 0 1 2 3 4 4 5 6 2 3 4 5 7 8 9 0 1 9 0 1 2 3 4																																										

\*TOTALS

## Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Developmental Malformation							X															1

## Cardiovascular System

NONE

## Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Hyperplasia, Focal																						1 1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25

## General Body System

NONE

## Genital System

Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Diestrus								X	X													7
Estrus	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	9
Metestrus	X			X																		3
Proestrus			X																X	X	X	6
Oviduct	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/19/2014

Time Report Requested: 04:29:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female F3 0 PPM	DAY ON TEST																							
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	
		1	1	1	1	1	0	0	0	0	1	2	0	0	2	2	2	1	1	1	3	2	1	9
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9
		4	4	5	5	5	5	1	1	1	6	6	6	6	0	0	1	1	2	3	3	3	3	3
		8	9	0	1	2	3	4	4	5	6	2	3	4	5	7	8	9	0	1	2	3	4	4
		*TOTALS																						
Uterus		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Decidual Reaction		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	23	
Diestrus								X	X						X	X	X				X	X	7	
Endometrium, Hyperplasia, Cystic																								4
Estrus		X		X	X		X		X	X		X			X									1 4.0
Metestrus		X			X																			3
Proestrus			X												X	X								5
Vagina		+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	24	
Diestrus							X	X							X	X	X				X	X	7	
Estrus		X		X		X	X		X	X					X								7	
Metestrus		X			X										X									4
Proestrus			X												X	X								6
<b>Hematopoietic System</b>																								
Bone Marrow		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Spleen		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Thymus		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
<b>Integumentary System</b>																								
Mammary Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
Alveolus, Hyperplasia		2	2	2	3	2	3	1	2							1	2	1						11 1.9
Skin		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25	
<b>Musculoskeletal System</b>																								

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

**Experiment Number:** 99930-96

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Type:** SPECIAL STUDY

**Route: DOSED FEED**

**Species/Strain:** Rat/CD

**Test Compound:** Endocrine disruptor (Genistein)

CAS Number: 446-72-0

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:29:02

**First Dose M/F:** NA / NA

Lab: NCTR

Bone, Femur

## **Nervous System**

NONE

# Respiratory System

NONE

## **Special Senses System**

NONE

## Urinary System

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

I ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild      4) Marked



Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:02

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female  
F3/5PPM TO CTL**

DAY ON TEST	ANIMAL ID																				*TOTALS
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	
	1	1	1	2	0	0	9	2	2	2	2	1	1	1	1	1	0	0	4	2	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9
5	5	5	5	1	1	1	2	3	6	6	6	6	7	7	1	1	1	1	1	3	3
5	6	7	7	8	9	0	6	6	7	8	9	0	1	2	3	4	5	6	7	8	9

Decidual Reaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	24	
Diestrus																					2
Estrus					X	X			X			X									6
Metestrus		X	X							X	X	X									10
Proestrus	X		X		X	X	X		X												7
Vagina	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Diestrus																					2
Estrus					X	X			X	X		X	X								8
Metestrus		X	X						X	X		X									10
Proestrus	X		X		X	X	X														5

**Hematopoietic System**

Bone Marrow																					1
Spleen																					1
Thymus																					1

**Integumentary System**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	25
Alveolus, Hyperplasia	1	3	4	3	1	3	3				1		1	3	1	2				12 2.2
Lobules, Hyperplasia			4		1						1		2							4 2.0

Skin

+

1

**Musculoskeletal System**

Bone, Femur																					1
-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 04:29:02

CAS Number: 446-72-0

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female  
F3/5PPM TO CTL**

DAY ON TEST																				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6
1	1	1	1	2	0	0	9	2	2	2	2	1	1	1	1	1	0	0	0	4
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9
5	5	5	5	1	1	1	2	3	6	6	6	6	7	7	1	1	1	1	1	3
5	6	7	7	8	9	0	6	6	7	8	9	0	1	2	3	4	5	6	7	8

\*TOTALS

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

Kidney

+ + + + + + + + + + + + + + + + + + + + + + 25

Cyst

X X 2

Mineralization

1 1 2 2 3 1 1 2 1 1 1 2 4 2 2 3 1 1 1 1 1 22 1.6

Renal Tubule, Regeneration

1 1 1.0

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/19/2014

Time Report Requested: 04:29:02

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female**  
**F3/100PPM TO CTL**

|                               | DAY ON TEST | Lesion Data |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | *TOTALS |    |     |
|-------------------------------|-------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|----|-----|
|                               |             | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |    |     |
| ANIMAL ID                     | 1           | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1       |    |     |
|                               | 0           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0       |    |     |
| Proestrus                     | X           | X           |   |   | X | X |   |   |   | X |   |   |   |   |   |   |   | X |   | X | X | X       | 9  |     |
| Vagina                        | +           | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       | 25 |     |
| Diestrus                      |             | X           |   | X | X |   |   | X |   |   | X |   | X | X |   |   |   | X | X |   |   |         | 9  |     |
| Estrus                        | X           |             |   | X | X |   | X | X | X |   |   |   |   |   |   |   |   | X |   |   |   |         | 7  |     |
| Metestrus                     |             |             | X |   |   |   |   |   |   | X |   |   | X |   |   |   |   | X | X |   |   |         | 4  |     |
| Proestrus                     |             | X           |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   | X | X | X |         | 5  |     |
| <b>Hematopoietic System</b>   |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| NONE                          |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| <b>Integumentary System</b>   |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| Mammary Gland                 | +           | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       | 25 |     |
| Alveolus, Hyperplasia         |             | 2           |   | 3 |   |   | 1 |   | 2 |   | 1 | 1 | 2 | 2 |   |   |   | 1 |   | 2 | 1 |         | 11 | 1.6 |
| <b>Musculoskeletal System</b> |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| NONE                          |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| <b>Nervous System</b>         |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| NONE                          |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| <b>Respiratory System</b>     |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| NONE                          |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| <b>Special Senses System</b>  |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |
| NONE                          |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |    |     |

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

**Experiment Number:** 99930-96

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Compound:** Endocrine disruptor (Genistein)

CAS Number: 446-72-0

**Date Report Requested:** 10/19/2014

**Time Report Requested:** 04:29:02

**First Dose M/F:** NA / NA

Lab: NCTR

---

## Urinary System

Kidney

### Cyst. Multiple

### Mineralization

1 1 4 1 1 2 1 2 2 4 4 2 4 3 2 2 3 1 3 2 3 1 22 22

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

± .. Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

#### A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

#### | Insufficient tissue

BLANK - Not examined microscopically

2) Mild      4) Marked

Experiment Number: 99930-96

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/19/2014

Time Report Requested: 04:29:02

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female**  
**F3/500PPM TO CTL**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| I           | I | I | I | I | 0 | I | I | I | I | 0 | 0 | 0 | I | I | I | I | 0 | 2 | I | I |
| 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7           | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 |
| 6           | 6 | 6 | 6 | 6 | 6 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 7 | 8 | 8 | 8 | 2 | 2 |
| 5           | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 5 | 6 |
|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7 | 8 |
|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8 | 9 |

\*TOTALS

**Alimentary System**

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |     |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Liver                        | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | 24 |     |
| Inflammation, Chronic Active |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   | 1  | 2.0 |

**Cardiovascular System**

NONE

**Endocrine System**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Thyroid Gland   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

**General Body System**

NONE

**Genital System**

|           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Ovary     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Diestrus  |   | X |   |   | X |   | X | X |   |   |   |   |   |   |   |   | X |   |   | X | 6  |
| Estrus    | X |   |   | X | X |   | X |   |   |   |   |   |   |   |   | X |   |   | X |   | 6  |
| Metestrus |   |   |   |   |   |   | X |   |   | X | X |   |   | X | X |   | X |   |   | X | 7  |
| Proestrus |   | X |   | X |   |   |   |   |   | X | X |   |   |   |   |   |   | X | X |   | 6  |
| Oviduct   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Uterus    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

I ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

- 1) Minimal
- 2) Mild
- 3) Moderate
- 4) Marked

**Experiment Number:** 99930-96

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Date Report Requested:** 10/19/2014

**Test Type:** SPECIAL STUDY

**Route: DOSED FEED**

**Species/Strain:** Rat/CD

**Test Compound:** Endocrine disruptor (Genistein)

CAS Number: 446-72-0

**Time Report Requested:** 04:29:03

**First Dose M/F:** NA / NA

**Lab:** NCTR

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

X ..Lesion present

A ..Autolysis precludes evaluation

| ..Insufficient tissue

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate  
2) Mild 4) Marked

